

**A METHOD OF DESIGNING A FLEXURE SYSTEM FOR TUNING THE MODAL
RESPONSE OF A DECOUPLED MICROMACHINED GYROSCOPE AND A
GYROSCOPED DESIGNED ACCORDING TO THE METHOD**

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Abstract of the Disclosure

For a decoupled gyro to have high sensitivity to angular rate, it is necessary to have the design flexibility to achieve all the critical frequencies in the design. The geometry of the gyro is first estimated and is followed by a performance analysis to maximize the gyro sensitivity. If the performance requirements cannot be met, the next iteration is started by a new estimate of the geometry. For a given design iteration, the desired modal response is implemented with a predetermined or given gyro flexure system. The flexure system disclosed here has enough independent design parameters to allow the desired modal response required for high gyro performance to be selected by independent design choice of the available geometric and configurational design parameters of the gyroscope.